



**CONESTOGA-ROVERS
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US EPA RECORDS CENTER REGION 5



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April 20, 2012

Reference No. 056394-06

Ms. Sheila Desai
Remedial Project Manager
United States Environmental Protection Agency - Region 5
77 West Jackson Boulevard (SR - 6J)
Chicago, IL 60604 - 3590

Dear Ms. Desai:

Re: Responses to U.S. EPA Comments
Remedial Investigation Report
Former Plainwell, Inc. Mill Property Operable Unit No. 7
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Allegan and Kalamazoo County

Conestoga-Rovers & Associates (CRA) has prepared this letter, on behalf of the Weyerhaeuser Company (Weyerhaeuser), in response to the February 17, 2012 United States Environmental Protection Agency's (U.S. EPA's) comments on the Remedial Investigation (RI) Report for the former Plainwell, Inc. Mill Property (Site), which was submitted to the U.S. EPA Region 5 on June 20, 2011. The RI Report was submitted in accordance with the RI/Feasibility Study (FS) Work Plan dated July 2009, the Multi-Area Field Sampling Plan dated November 2009, the Phase II RI Work Plan dated November 2009, the Statement of Work (SOW) for the RI/FS, and the terms of the Consent Decree for the Design and Implementation of Certain Response Actions at Operable Unit #4 and the Plainwell, Inc. Mill Property of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Consent Decree), which became effective February 22, 2005.

The following presents responses to the U.S. EPA's comments consistent with the revisions to the RI Report dated April 20, 2012. Three copies of the revised RI Report are attached for your use.

U.S. EPA General Comment #1

The RI report generally follows EPA guidance outlined in Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (EPA 1988); however, the report does not include an executive summary. An executive summary should be included at the beginning of the report.

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Response

An Executive Summary is included in the revised RI Report.

U.S. EPA General Comment #2

Given the numerous exceedances of screening criteria, Site-specific soil and groundwater background sampling is necessary to evaluate the nature and extent of metals and inorganic contamination in soil and groundwater. The report alludes to possible need for collecting background samples but does not indicate when sample collection would occur. The report should be revised to discuss: (1) whether site characterization is considered complete or background sampling is needed to complete the RI phase of work, and (2) the impact of omitting Site-specific background sampling.

Response

A discussion regarding background sampling for soil and groundwater is included in the revised RI Report. Weyerhaeuser and CRA contend that background sampling for metals in soil and groundwater will provide no additional benefit to the data set and will not change the decision-making process moving forward, and, therefore, will not be proposed to complete the RI. The rationale for this position is outlined in the following paragraphs.

Based on the review of the analytical data, various metals are present at the Site in soil that exceed the Part 201 Generic Residential and Non-Residential Cleanup Criteria. Additionally, a number of these locations exceed the Michigan State Default Background Levels (SDBLs), as well as the Allegan County-specific values for a variety of metals provided on the United States Geological Survey (USGS) website¹. Of these metals, the majority consist of exceedances of the Part 201 Drinking Water Protection Criteria or the Groundwater Surface Water Protection Criteria. The remainder of the Part 201 pathway exceedances only identify three metals of concern: arsenic, lead, and manganese.

Arsenic is present at varying concentrations throughout the majority of the Site. A total of 574 data points exist for arsenic, of which 234 exceed the Part 201 Generic Residential Direct Contact Criterion for arsenic, with 15 of those exceedances also exceeding the Part 201 Generic Non-Residential Direct Contact Criterion for arsenic. The only other exceedance of Part 201 soil criteria, which is not related to protection of groundwater, is one sample exceeding the Part 201 Generic Residential Particulate Soil Inhalation Criterion. CRA's experience with determination

¹ USGS website: <http://tin.er.usgs.gov/geochem/doc/averages/countydata.htm>



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of Site-specific background concentrations for arsenic suggests that the background concentration can vary significantly from site to site, but very rarely is higher than the high teens in milligrams per kilogram (i.e., values of background arsenic concentration higher than 17 or 18 mg/kg are very rare). Moreover, CRA is not aware of any information to suggest that the background concentration for arsenic would be in this high a range for this Site (i.e., data from less developed portions of the Site data from background calculations at nearby sites). Hypothetically speaking, if the concentration of arsenic was as high as 17 or 18 mg/kg, a significant number of exceedances of background concentrations would be present at the Site. Therefore, even if a Site-specific background concentration for arsenic was determined, there would still be widespread exceedances of arsenic at the Site, including, but not limited to, the exceedances of the Part 201 Generic Non-Residential Direct Contact Criterion and the Residential Particulate Soil Inhalation Criterion.

A better approach for addressing the widespread arsenic in Site soils would be to utilize the human health risk assessment calculations/conclusions to develop a Site-specific risk-based allowable concentration for the Site. This number could be developed Site-wide or by development area. Preliminary estimates of such a number suggest that a Site-specific risk-based arsenic concentration could be as high as 20 mg/kg or higher, depending on the specific risk assumptions used to develop the criterion. This approach would address a significant number of the arsenic impacts at the Site, which would not be addressed through Site-specific background calculations while remaining protective of human health and the environment.

Lead is present at a limited number of locations across the Site above Part 201 Generic Residential and Non-Residential Direct Contact Criteria and is likely not due to background conditions (i.e., the concentrations of significantly higher than anticipated Site-specific background concentrations). These exceedances would, therefore, be retained for considerations of remedial activities in the Feasibility Study (FS) regardless of whether or not Site-specific background concentrations are determined. Similarly, manganese is present above the non-groundwater protection cleanup criteria in three locations as a particulate inhalation issue and is not indicative of a background situation. These concentration are also sufficiently high that they would not likely be eliminated from further consideration in the FS regardless of Site-specific background concentrations are determined.

The remaining soil exceedances of Part 201 Cleanup Criteria at the Site relate to groundwater protection criteria (i.e., either soil criteria protective of drinking water or soil criteria protective of the groundwater surface water interface). Although Site-specific background calculations would likely have some benefit to reducing the number of parameters or locations that require further consideration in the FS, these issues would not be completely eliminated. Moreover, there are other mechanisms under Part 201 to address these impacts, which will not result in



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active remedial activities and which would likely be implemented at this Site. These include analysis of the total soil data relative to the Synthetic Precipitation Leaching Procedure (SPLP) data collected for the Site and the actual presence of these constituents in groundwater, restrictions on groundwater use, and/or consideration of mixing zone determination for selected parameters as needed.

Additionally, even if there was a significant benefit to determining Site-specific background concentrations of metals in soil, collection of representative background soil samples would be extremely challenging to complete at the Site or off Site in proximity to the Site due to historical operations conducted on Site and in the area. For example, arsenic, a known historical agricultural chemical, is one of the primary metals of concern identified above the Part 201 Generic Residential and Non-Residential Cleanup Criteria throughout the Site. Representative sample collection in a historical agricultural setting in the vicinity of the Site would present an issue.

With respect to groundwater, determination of representative background concentrations of metals would also be a challenge and would add limited value to the decision-making process for this Site. Given the influence of the Mill Race and the Kalamazoo River on the groundwater flow patterns at the Site, it would be challenging to determine a suitable number of upgradient monitoring locations which could be used to establish background concentrations of metals in groundwater. However, if we assume the monitoring wells along the southern boundary of the Site are reflective of the upgradient concentrations and the monitoring wells along the northern portion of the Site to be reflective of downgradient conditions, then comparison of concentrations detected in groundwater monitoring wells located along the southern portion of the Site (MW-17, MW-1, MW-6, MW-9, and MW-18) in the upgradient groundwater flow direction to the groundwater monitoring wells located along the northern portion of the Site (MW-3, MW-4, MW-5, MW-7, MW-15, MW-10, MW-11, and MW-12) indicates that the concentrations of metals detected above the Part 201 Residential and/or Non-Residential Drinking Water Criteria and/or Groundwater Surface Water Interface Criteria are generally higher along the northern portion than the southern portion of the Site. This indicates that concentrations in the downgradient direction of the historical Site operations are higher than those more representative of "background" concentrations from monitoring wells located along the upgradient portion of the Site. Additionally, impacts to groundwater currently include only the Part 201 Generic Residential and/or Non-Residential Drinking Water Criteria and Groundwater Surface Water Interface Criteria. The exceedances of the Drinking Water Criteria will be addressed through an institutional control (i.e., deed restriction on the use of groundwater); therefore, further evaluation of conditions relative to background concentrations is not required. The exceedances of the Groundwater Surface Water Interface Criteria are not human-health based and may be further assessed through a mixing zone evaluation/determination.



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U.S. EPA General Comment #3

The report must include language evaluating the adequacy of the existing groundwater monitoring network at the site. Although there is the potential for the site hydrologic conceptualization to change with the collection of additional potentiometric data, an evaluation of the groundwater monitoring network is appropriate for inclusion in this document. Key questions such as "Is there adequate monitoring of the site groundwater where site groundwater crosses property lines? Is there a groundwater monitoring well or wells in the flow path downgradient from potential source areas? Is the groundwater monitoring network adequate to determine flow direction toward off-site areas? Groundwater should be addressed adequately.

Response

A discussion regarding the adequacy of the existing groundwater monitoring network and any potential data gaps identified is included in the revised RI Report.

As outlined in the discussion added to the RI Report, it is recommended that the existing monitoring well network be augmented to include deeper (nested adjacent to an existing shallow monitoring well) well screens to evaluate the potential venting to surface water and to supplement the existing known hydrogeologic conditions of the aquifer beneath the Site. In addition, the need for additional monitoring wells where groundwater passes beneath the Site property lines will be evaluated with regard to current and potential future land and resource uses, as appropriate.

The additional work proposed above will be included in the Work Plan for Additional RI Activities to be submitted as recommended in revised RI Report. As noted in the Work Plan, Weyerhaeuser proposes to prepare an addendum to the RI Report to document the additional activities completed at the Site.

U.S. EPA General Comment #4

Because discussions have occurred previously about proceeding with work within specific areas of the site on an accelerated schedule, the summary and conclusions section (Section 10) should discuss how the RI results may impact planned work at the Fannie Pell Bridge, coal tunnel, and public works building areas. After completion of Phase II RI field work, Weyerhaeuser and CRA proposed additional soil and groundwater sampling related to possible



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construction of the Fannie Pell Bridge (soil borings SB-2014 and SB-2015). Part of the rationale for proposing only two borings was that results would be available from samples collected at other nearby locations, as shown on Figure 2 of the Fannie Pell Bridge work plan. Analytical results for the nearby sampling locations cited in the work plan (SB270, SB-271, SB-272, SB-279, SB-280, SB-284, and MW-16) indicate that some metals/inorganics and volatile organic compounds (VOC) in soil exceed their respective Michigan Part 201 levels within these areas. In addition, polychlorinated biphenyls (PCB) exceed Part 201 criteria in a shallow soil sample from boring MW-16. Soil and groundwater analytical results from samples collected at the two borings drilled as part of the Fannie Pell Bridge work (borings SB-2014 and SB-2015) should also be presented along with RI results for Area 2B, and the results from all three areas cited should be part of discussion regarding possible acceleration of work in these areas.

Response

Information obtained during the implementation of the Fannie Pell Bridge Work Plan, including soil boring logs and soil and groundwater analytical data has been incorporated in the revised RI Report. Additionally, a copy of the memorandum entitled *Summary of Soil and Groundwater Investigation Activities, Fannie Pell Park Western Bridge Footing, Former Plainwell, Inc. Mill Property, Plainwell, Michigan* and dated and submitted to U.S. EPA on February 24, 2011 is included in Appendix E of the revised RI Report.

No additional sampling has been completed to date related to the former coal tunnel area or Sludge Dewatering Building (Proposed Public Safety Building).

Additional investigation in the vicinity of MW-16, in support of ongoing redevelopment activities at the Site, was completed on March 29, 2012. A total of 15 soil borings were advanced in the immediate vicinity of MW-16 documented through email exchanges between U.S. EPA and CRA. This work is also included in the Work Plan for Additional RI Activities to be submitted as recommended in revised RI Report. As noted in the Work Plan, Weyerhaeuser proposes to prepare an addendum to the RI Report to document the additional activities completed at the Site.

U.S. EPA General Comment #5

The former Mill Building contains asbestos containing material (ACM) not discussed in the RI or in the risk assessments. The report should be revised to include a discussion of how this material relates to the overall RI/FS process, and when and how it will be addressed.



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Response

Section 2.2.2 of the revised RI Report discusses the evaluation of potential environmental concerns related to above-grade structures located at the Site, which was conducted as part of decommissioning assessments implemented by the City of Plainwell.

The Complaint filed prior to issuance of the Consent Decree identifies the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability of the Site as "The Mill, including its surface and subsurface soils and water, is a "facility," within the meaning of Sections 101(9) and 107(a) of CERCLA, 42 United States Code §§ 9601(9) and 9607(a)." Based on the aforementioned CERCLA liability definition within the Consent Decree, the RI/FS does not address potential environmental issues associated with above-grade structures at or on the Site. No potential asbestos containing materials (ACM) or ACM were identified in surface and subsurface soils or water at the Site during the RI. It should be noted; however, that the City of Plainwell has secured grants to decommission and demolish selected structures at the Site. This work is being completed by the City of Plainwell in consultation with the Michigan Department of Environmental Quality (MDEQ).

U.S. EPA General Comment #6

Section 6.0 of the RI report should include a summary of the conclusions of (1) the "Data Quality Summary Reports" generated as required by Worksheet No. 33 of the Quality Assurance Project Plan (QAPP) and (2) the "Usability Assessment" generated as required by Worksheet No. 37 of the QAPP. Particular attention should be paid to impact on the site characterization of the various analytical data qualifications (especially rejection of some analytical results) and the sample dilutions (and consequent raised detection limits).

Response

Section 6.0 of the RI report will be expanded providing a summary of the conclusions from the data quality assessment summary and the usability assessment.

U.S. EPA Specific Comment #1

Pages 10, 11, 12. The text discusses mixing RI and pre-RI data. The text should also discuss the data quality of the pre-RI data and whether reference to those data is for information purposes only or for use in decision making. The text should also refer to Figures 2.1 through 2.3 when referring to pre-RI data.



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Response

As part of the development of the Phase II RI Work Plan, CRA conducted a review of the Pre-RI data to assess the usability of the data for inclusion in the RI. Based on that review and to the best of CRA's knowledge, the samples from Pre-RI investigations were analyzed by National Environmental Laboratory Accreditation Conference (NELAC)-accredited laboratories using standard U.S. EPA methods, consistent with those methods selected in the Quality Assurance Project Plan (QAPP). To attain NELAC accreditation, laboratories must pass rigorous audits and semiannual proficiency testing, which attest to the quality of the laboratories used to perform these sample analyses. The U.S. EPA methods used to analyze the samples include significant quality assurance and quality control requirements that must be met by the laboratories during testing.

In addition, the data from the RI was used to supplement the Pre-RI data and, therefore, used together in development of the RI. Evaluation of the data did not produce any significant discrepancies between the Pre-RI data and the RI data, which would suggest the data quality of the pre-RI data is questionable. Therefore, given the above and the lack of any indication that the data is not usable for the purposes of the RI, despite the absence of a QAPP, there is no reason to question the quality of these data.

The text has been revised to refer to Figures 2.1 through 2.10, which identify the locations of Pre-RI sample locations for each individual redevelopment area evaluated, with the exception of Commercial Area 1, where no Pre-RI samples were collected.

U.S. EPA Specific Comment #2

Section 2.4.2, Page 20. The text refers to "a portion of the Mill Race [which] is diverted to run beneath the former mill..." the location of this surface water and the elevation change within this surface water should be identified on the groundwater contour maps as the influence of this diverted water might contribute to a better understanding of groundwater flow in the northeastern portion of the site.

Response

Section 2.4.2 has been revised to address this comment. The Mill Race is dammed just prior to its confluence back to the Kalamazoo River. Hydraulically, the Mill Race is approximately 6 feet higher than the Kalamazoo River. A portion of the Mill Race is diverted to run beneath the former Mill prior to the dam. The diverted portion of the Mill Race runs under Building 20,



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and the difference in hydraulic head was captured by a turbine to generate electricity to power the Mill property during operations prior to rejoining the Kalamazoo River downstream of the confluence of the Mill Race and Kalamazoo River. The divergence of the Mill Race beneath the building prior to the Mill Race entering the Kalamazoo River and the reintroduction of the flow associated with the divergence after the confluence of the Mill Race and Kalamazoo River may impact the interaction between the associated surface water bodies and groundwater in this portion of the Site, as inferred in Figures 2.19 and 2.20. Figures 2.19 and 2.20 provide groundwater flow contours for the uppermost aquifer across the Site for January and February 2010, respectively. These groundwater contours illustrate groundwater flow at the time they were taken, and additional static water level collection events and evaluation of groundwater flow direction would need to be conducted to determine typical groundwater flow patterns across the Site.

The additional work proposed above will be included in the Work Plan for Additional RI Activities to be submitted as recommended in revised RI Report.

U.S. EPA Specific Comment #3

Section 2.4.3, Page 21. The report should explain that groundwater flow indicated on the groundwater contour maps (Figure 2.12 and 2.13) are "snapshots" and should not be assumed to be representative of typical groundwater flow at the site. The text should be revised to state that the difference in groundwater flow patterns shown on Figures 2.12 and 2.13 may be in part due to availability of additional data points in February 2010 (the Phase II RI monitoring wells). It appears, from the limited set of groundwater elevation data available, that the river (as well as the Mill Race) has a significant effect on groundwater flow directions at the site. This could result in significant temporal changes in groundwater flow direction at this site. The collection of additional monitoring well and staff gauge data at this site will be necessary to better understand this fundamental need.

The report should indicate that the groundwater contour maps indicate a need for improved coverage in Area 1 and Area 3A, particularly where site groundwater crosses property boundaries into the residential neighborhood and the properties to the west. In both areas, the groundwater monitoring data is so sparse that the direction of groundwater flow is uncertain and highly subject to interpretation. Once the understanding of flow direction in offsite directions is improved and the quality of groundwater at those locations is determined, then any need to address potential contamination can then be assessed.



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Response

The revised RI Report has been modified to clarify that current Figures 2.19 and 2.20 provide groundwater flow contours for the uppermost aquifer across the Site for January and February 2010, respectively, based on static water levels were measured in groundwater monitoring wells across the Site on January 13, 2010, and again on February 5, 2010. These groundwater contours illustrate groundwater flow at the time they were taken, and additional static water level collection events and evaluation of groundwater flow direction would need to be conducted to determine typical groundwater flow patterns across the Site. It should be noted that variability in the groundwater flow contours from January to February 2010 may be due in part to the availability of additional monitoring points in February 2010, subsequent to the installation of the Phase II RI monitoring wells. With the creation of the Mill Race and dam to the east of the Site (artificially holding the surface water there above the river stage), the uppermost, unconfined, water table aquifer appears to be recharged by the surface water within the Mill Race. Groundwater flow within water table aquifer during these events is to the west from the Mill Race (flowing sub-parallel to the flow of the Kalamazoo River) across the Site. It also appears that a portion of the Kalamazoo River itself may recharge the aquifer beneath the Site along the northeastern limit of the property. As the groundwater reaches the western portion of the property, the flow direction appears to change to the northwest, where it discharges back to the Kalamazoo River. Please see response to U.S. EPA Specific Comment #4 related to the relationship between groundwater and surface water at the Site.

The revised RI Report has been modified to present recommendations relative to data gaps associated with the existing monitoring well network, from both a groundwater chemistry and flow regime perspective.

U.S. EPA Specific Comment #4

Section 2.4.3, Page 21, Paragraphs 3 and 4. The text discusses site hydrogeology. The text should discuss the relationship between groundwater and surface water elevations with respect to how changes in river stage may affect groundwater elevations, flow directions, and hydraulic gradients. Therefore, the conclusions and recommendations section of the report should discuss whether periodic (monthly or quarterly) groundwater and surface water elevation measurements are necessary to gain a better understanding of groundwater flow variability.



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Response

The revised RI Report has been modified to discuss the known and inferred relationships between groundwater and surface water along the northern and eastern property boundaries, based on available information to date.

With the removal of the Plainwell Impoundment downstream of the project Site, river stage levels would be primarily influenced by precipitation events or drought. There appears to be a direct relationship of the surface water in the Mill Race recharging the groundwater to the east of the Site. This recharge directly influences the direction of groundwater flow and hydraulic gradients across the Site. In addition, a portion of the Kalamazoo River may also be a source of local recharge to the aquifer in the immediate area of the confluence of the Mill Race with the Kalamazoo River. Groundwater appears to discharge to the Kalamazoo River in the downgradient (westerly) portion of the Site.

It is expected that there would be changes in overall head measurements within the aquifer with increased stages of the river and lower overall head measurements in the aquifer with decrease stages of the river. Additional monitoring of the groundwater levels and river and Mill Race stages has been recommended in the RI Report throughout the seasons (quarterly) to further evaluate this relationship.

U.S. EPA Specific Comment #5

Section 2.5, Pages 21 and 22. The text discusses numerous wells and buildings in this section. The text should be revised to refer to a figure or figures showing the features discussed.

Response

Historical drawings depicting the wells and structures discussed in this section have been included in Appendix E to the revised RI Report and are referenced as such in Section 2.5.

U.S. EPA Specific Comment #6

Section 3.0. The section includes subsections that state that contaminant migration trends and groundwater modeling may be conducted. The text should state when these will be conducted within the RI/FS process. In addition, Section 3.3 should be revised to discuss activities in the past tense if any of these evaluations have been completed per discussions in Section 5 or in the risk assessments.



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Response

Based on the information collected during the Pre-RI and RI, groundwater contamination trends cannot be completed at this time due to a lack of available legacy data. Groundwater exceedances are limited to exceedances of the Part 201 Generic Residential and Non-Residential Drinking Water Criteria and the Groundwater Surface Water Interface Criteria. Use of groundwater at the Site is currently restricted, and there are no known off Site or property boundary indications of off-Site migration of contamination.

Based on current information, groundwater modeling is not anticipated to be required as part of the RI/FS activities. Modeling may be required in the future to enhance the understanding of contaminant migration and the Site and/or to support Remedial Design.

The revised RI Report has been revised to reflect the above.

U.S. EPA Specific Comment #7

Section 4.1.3. This section (as the title indicates) includes a "Summary of Contamination Removed." This includes a brief description of past floodplain and sediment removals. This section should include a summary (with an attached figure) identifying the limits of excavation and material remaining, particularly as it pertains to sediment removal.

Response

The revised RI Report has been modified to direct the reader to the Ecological Risk Assessment (ERA) (report in Appendix E, which in addition to the description of the removal actions conducted during the ERA, includes figures of Zones A through D, which present the approximate limits of the excavations completed as part of the removal activities. The figures also provide sample locations and concentrations of polychlorinated biphenyls (PCBs) remaining in place in these areas.

U.S. EPA Specific Comment #8

Section 5.2.1.1. Page 37, Last paragraph. The text states "It should be noted that the ERA is not part of the RI/FS for the site and the detected constituents identified during the ERA are considered off-site for the purposes of this RI..." This text is not accurate. The site boundary is being defined as the "top of the bank." Clearly, the contaminants associated with the "Bank



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work" extended beyond the top of the bank, onto the site in several areas. As such, the report should more accurately reflect that some of the ERA work extended onto the site and did not remove all contaminated material.

Response

The revised RI Report has been modified to include soil samples collected from Zone C during the ERA, specifically from Test Excavations 1 through 6, which appear from the figures included in the ERA to have been collected from beyond the "top of the bank" onto the Site. Review of the ERA text and figures was not clear in all instances relative to the nature (sediment versus soil, etc.) and location of samples collected (i.e., floodplain versus toe of bank) relative to the defined extent of the Site presented in the Consent Decree in relationship to the "top of the bank." Additionally, it appeared that the comparison criteria to be utilized for the work was 1 part per million (ppm) PCBs in sediment samples and 4 ppm PCBs in soil samples; no comparison to the 4 ppm PCBs was discussed in the ERA, inferring that all samples collected were sediment.

The revised RI Report provides a summary of the ERA activities, including identification of areas where elevated PCB concentrations remained in place due to field conditions at the time of the implementation of the ERA. A copy of the ERA is provided in Appendix E to the revised RI Report, which discusses the extent of the activities and sample collection locations relative to the Site.

It should also be noted that five of the test pits (TP-11 through TP-15) installed during the Phase I RI were completed in the vicinity of elevated PCB concentrations detected off Site during the ERA that were identified to consist of fill material during the geophysical survey, specifically exceedances left in place in Zone D. Results of samples from these test pits did not indicate the presence of PCBs in soil samples above the Part 201 Generic Residential and Non-Residential Cleanup Criteria.

U.S. EPA Specific Comment #9

Section 5.2.2.2, Page 46, Paragraph 1. The text states that verbal approval was given by SulTRAC prior to sampling. Although it is just a matter of semantics, the text should be revised to state that SulTRAC "concurred" with the final sampling locations as EPA has final approval.



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Response

The text in the revised RI Report has been amended to indicate that SulTRAC "concurred" with the final sampling locations.

U.S. EPA Specific Comment #10

Section 5.2.2.2, Page 47, "Sampling Program 1." The bullet items listed under this heading should all be written in the past tense, as this work already has been completed.

Response

The text in the revised RI Report has been amended to correct the verb tense from future to present tense.

U.S. EPA Specific Comment #11

Section 5.2.2.2.1, Page 48, Bullet 3. The text states that "Paper residuals were not observed in SB-101 or SB-103." The next sentence states that "Limited paper residuals were observed in SB-101 from 0.2 to 1-foot bgs (mixed with clay fill)." The text must be revised to resolve this inconsistency.

Response

The text in the revised RI Report has been amended to resolve this inconsistency. Paper residuals were observed in SB-102 from 0.2 to 1-foot bgs (mixed with sand fill).

U.S. EPA Specific Comment #12

Section 5.2.2.2.4, Page 53, Bullet 1. The text states soil borings SB-324 and SB-326 could not be completed due to refusal; therefore, no samples were collected from these locations. The text should be revised to discuss whether any attempt occurred to move the borings to alternate locations in order to collect the proposed samples.



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Response

The text has been revised to discuss these two locations and the field activities completed to attempt to collect samples. Additionally, a copy of the memorandum entitled *Summary of Modifications to Proposed Soil Boring Locations, Supplemental Phase II RI Activities, Former Plainwell, Inc. Mill Property, Plainwell, Michigan* dated and submitted to U.S. EPA on September 9, 2010, which discusses sampling locations, including the sample locations referenced in the above comment, where Site field conditions or circumstances either prevented soil boring advancement or required a boring to be relocated significantly (i.e., greater than 10 feet) from its originally proposed location, is included in Appendix E of the revised RI Report.

U.S. EPA Specific Comment #13

Section 5.2.2.2.4, Page 52, Paragraph 3. The text states that in Area 3A, test pits were installed to depths between 7 and 10 feet bgs. The approved Phase II RI work plan listed the completion depths of the test pits at 10 feet bgs. Similar to explaining why some borings were terminated early due to refusal, the text should explain why some test pits were terminated at depths less than 10 feet bgs.

Response

Consistent with the Field Sampling Plan (FSP), test pit installation was to 0 to 2 feet below the observed non-native/native soil interface on a location specific basis. Based on the observed depth to native soils in this area, depths of test pits were adjusted accordingly. The text of the RI Report has been revised accordingly to clarify the test pit installation approach.

U.S. EPA Specific Comment #14

Section 5.2.2.2.5, Page 53, Paragraph 2. The text states that in Area 3B, test pits were installed to depths between 5 and 10 feet bgs. The approved Phase II RI work plan listed the completion depths of the test pits at 10 feet bgs. Similar to explaining why some borings were terminated early due to refusal, the text should explain why some test pits were terminated at depths less than 10 feet bgs.

Response

Please see the response to U.S. EPA Specific Comment #13.



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U.S. EPA Specific Comment #15

Section 5.2.2.2.6, Page 54, Paragraph 1. The text states that in Area 3C, test pits were installed to depths between 6 and 10 feet bgs. The approved Phase II RI work plan listed the completion depths of the test pits at 10 feet bgs. Similar to explaining why some borings were terminated early due to refusal, the text should explain why some test pits were terminated at depths less than 10 feet bgs.

Response

Please see the response to U.S. EPA Specific Comment #13.

U.S. EPA Specific Comment #16

Section 5.3, Page 61. The text states "Summary of historical soil and groundwater data from the previous investigation, along with data [sic] from the RI investigations are presented in Appendices. Figures...present the associated sampling locations." The report needs to do a better job of presenting a summary of all the data for the site as opposed to sending the reader to the Appendices. Tables should summarize the data similar to Section 5.3.1, but the criteria and exceedances should be provided. Additionally, for PCBs, aquatic sediment criteria have been established which may be appropriate for screening purposes (an example being that PCB results for soil/sediments near the river are more appropriately compared to criteria such as 0.33 ppm as opposed to 4 ppm). Also, some attempt should be made to graphically present sample results, an example being the RI report for OU1 of the river which was cooperatively authored by MDEQ with EPA input.

Visual presence of residuals have long been used as an indicator at the OUs for the site. The report indicates that PCB is not a constituent of concern (COC) in Area 1 of the site, despite the fact that a properly documented remediation of this area was never performed. Such lagoons were major sources of PCBs to the river and are understood to be areas of concern at other Operable Units for the site. In addition, later sections of the report contradict the description of PCB results. More discussion on this topic is needed in the report.

Response

The revised RI Report has been modified to include additional tables for each of the 11 redevelopment areas of the Site, by media, in comparison to Michigan Act 451, Part 201 (Part 201) Generic Residential and Non-Residential Cleanup Criteria for media-specific Chemical of Concern (COC) lists. The media-specific COC lists were determined by screening



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all data for a particular media against the Part 201 Generic Residential and Non-Residential Cleanup Criteria; if an exceedance of any of the Part 201 Generic Residential and Non-Residential Cleanup Criteria was identified, that constituent was considered a COC for that media type in the table. Tables were generated for each redevelopment area with the selected COC list and are presented, with comparison to and flagged with exceedances of, the Part 201 Generic Residential and Non-Residential Cleanup Criteria as Tables 5.1 through 5.11 for soil samples, Tables 5.12 through 5.21 for groundwater samples, and Tables 5.22 through 5.32 for soil SPLP samples, respectively. Comparison criteria for soil, groundwater, and soil SPLP COCs are presented in Tables 5.33, 5.34, and 5.35, respectively. Appendices A through C include all analytical results for soil, groundwater and SPLP samples, evaluated against and flagged with exceedances of, the Part 201 Generic Residential and Non-Residential Cleanup Criteria, as applicable. Summaries of the specific constituents exceeding the Part 201 Generic Residential and Non-Residential Cleanup Criteria and the nature of the exceedance (i.e., Part 201 Residential Drinking Water Protections Criteria, Part 201 Non-Residential Direct Contact Criteria, etc.) by media and by redevelopment area in Section 5.4.

As the defined area of the Site is the "top of bank" and no sediment samples were collected from the defined area of the Site as part of the RI evaluation, comparison to aquatic sediment criteria is not required.

Graphic presentations of the data are presented in the data box figures provided in the Plans section of the report. These present the results of the Pre-RI and RI data by redevelopment area and parameter group (e.g. volatile organic compounds [VOCs], etc.) for each of the soil and groundwater COCs consistently identified across the Site, with exceedances of Part 201 Generic Residential and Non-Residential Cleanup Criteria flagged.

Based on the results of the Pre-RI and RI soil and groundwater samples collected from "Area 1," which is defined as the operational area associated with the former wastewater treatment area, including the former lagoons, did not exhibit concentrations of PCBs above the Part 201 Generic Residential and Non-Residential Cleanup Criteria. Additionally, samples collected from intervals where paper residuals were observed during soil boring advancement and test pit installation did not exhibit concentrations of PCBs above the Part 201 Generic Residential and Non-Residential Cleanup Criteria. Therefore, PCBs were not included in the discussion of COCs which exceed Part 201 criteria for this area. Further discussion regarding PCBs in this area of the Site has been added to the revised RI Report.



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U.S. EPA Specific Comment #17

Section 5.3, Page 62, Paragraph 3. The text states that pre-RI and RI data were evaluated qualitatively and quantitatively to evaluate potential sources of impacts. The text goes on to discuss application of Part 201 criteria as screening criteria, and refers to the Site-specific risk assessment approach discussed in Section 8.0. As discussed in Specific Comment 1, the text should include a brief discussion of the usability of pre-RI data for risk assessment purposes.

Response

Please see response to U.S. EPA Specific Comment #1.

U.S. EPA Specific Comment #18

Section 5.4.8, Page 150, Paragraph 5. The text states that ".... groundwater in the downgradient direction of the coal tunnel did not exhibit impacts from petroleum products and no free product was observed in the associated monitoring well." Figures 2.12 and 2.13 show groundwater flow patterns and include wells MW-2 and MW-19 in proximity to the coal tunnel area. Based on the figures, neither well is positioned in an ideal downgradient direction from the coal tunnel. The text should be revised to discuss the uncertain significance of results from these wells, given the expected groundwater flow path.

Response

The revised RI Report has been modified to discuss the potential implications of the use of information collected from the existing monitoring wells MW-2 and MW-19 relative to position in the immediate downgradient direction from the coal tunnel based on the January and February 2010 groundwater contours. As discussed in the response to U.S. EPA Specific Comment #3, current Figures 2.19 and 2.20 (previously Figures 2.12 and 2.13) provide groundwater flow contours for the upper-most aquifer across the Site for January and February 2010, respectively, based on static water levels were measured in groundwater monitoring wells across the Site on January 13, 2010, and again on February 5, 2010. These groundwater contours illustrate groundwater flow at the time they were taken, and additional static water level collection events and evaluation of groundwater flow direction would need to be conducted to determine typical groundwater flow patterns across the Site and the adequacy of the current placement of monitoring wells in the coal tunnel area to evaluate the potential impacts to groundwater.



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Further evaluation of the groundwater flow direction, and the need for an additional monitoring well downgradient of the coal tunnel, has been included in the Work Plan for Additional RI Activities submitted with the revised RI Report.

U.S. EPA Specific Comment #19

Section 8.1.2.3. The chemicals of potential concern (COPCs) in the report must be expanded for all media to include the complete list of constituents identified above criteria and PCBs. Furthermore, the COPCs should not be defined exclusive to the specific "areas" that they happen to be identified in, but rather there should be site COPCs. For example, for groundwater COPCs for this site include antimony, aluminum, arsenic, benzoperylene, bis(2-ethylhexyl)phthalate, cadmium, chromium, copper, cyanide, iron, lead, manganese, mercury, selenium, vanadium, and zinc.

Response

The revised RI Report presents the chemicals of potential concern (COPCs) for the Site by development area, consistent with CRA's memorandum entitled *Proposed Modifications to Human Health and Ecological Risk Assessments, Remedial Investigation Report, Former Plainwell, Inc. Mill Property, Plainwell, Michigan*, which was submitted to U.S. EPA on November 9, 2011, which was reviewed and commented on by U.S. EPA in November 2011. This approach was selected and proposed in the memorandum due to the size of the Site and the nature of the historical activities conducted in different areas of the Site.

As discussed in the RI Report, different activities have occurred in distinct areas of the Site and, therefore, it is reasonable to assume that some areas of the Site may have different COPCs than others. For example, the COPCs that would be expected in the former lagoon area would be different than the COPCs expected in the undeveloped areas of the Site or areas used for a different purpose such as the Specialty Minerals area of the Site. Furthermore, it would be unreasonable to expect that COPCs in soil to migrate to other areas of the site to any significant degree. The only possible exception to this would be the areas related to the water treatment activities of the Site as the wastewaters would have been transferred to different parts of the Site for management as part of the normal Site processes.

Similarly, from a future use perspective, summarizing the COPCs by development areas is appropriate because the likelihood of a receptor venturing from one area of the Site to another area of the Site and becoming exposed to the COPCs for that area is low due to the well-defined and Site-specific nature of the development areas. In the event that this scenario does occur, it is reasonable to assume the exposure from the other areas of the Site would be minimal.



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U.S. EPA Specific Comment #20

Section 9.1.4. Second to last sentence should indicate that "Hydrophobic compounds will likely leave solution and become bound to organic matter or animal tissue."

Response

Evaluation of 11 development areas rather than the 3 areas in the June 20, 2011 RI Report submittal has resulted in this comment no longer being applicable.

U.S. EPA Specific Comment #21

Section 10.1.2, Page 248, Paragraph 1. The text states that construction activities may also result in disturbances of contaminants in the various media. The text should be revised to also include the possibility of transport of contaminants in the subsurface to the ground surface as a result of excavation and earthwork activities.

Response

The revised RI Report has been modified to indicate that contaminants may be moved from the subsurface to the ground surface during excavation and/or earthwork.

U.S. EPA Specific Comment #22

Section 10.1.3, Page 248, Paragraph 5. The text summarizes media with contaminants posing a cumulative risk exceeding 1E-04 and hazard index of 1. The text in all relevant sections should be revised to use 1E-06 as the point of departure for evaluating carcinogenic risk. This is consistent with the proposed redevelopment plan shown on Figure 8.1 that includes future residential land use in some areas.

Response

Representatives from the U.S. EPA, MDEQ, SulTRAC, Camp Dresser and McKee, Inc. (CDM), Weyerhaeuser, and CRA participated in conference calls on September 28, 2011 and October 28, 2011 related to draft Remedial Action Objects (RAOs) and Human Health Risk Assessment (HHRA) and Screening Level Ecological Assessment (SLERA) portions of the RI Report.



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Subsequently on behalf of Weyerhaeuser, CRA prepared a memorandum, entitled *Proposed Modifications to Human Health and Ecological Risk Assessments, Remedial Investigation Report, Former Plainwell, Inc. Mill Property, Plainwell, Michigan*, which was submitted to U.S. EPA on November 9, 2011.

The November 9, 2011 memorandum presented a modified approach to the HHRA performed as part of the June 20, 2011 RI Report submitted to the U.S. EPA, including the re-identification of the major contributors to risk/hazard as those COPCs with calculated carcinogenic risks above 1.0×10^{-6} and Hazard Indexes (HIs) above 1.0.

The revised RI Report has been modified to include 1.0×10^{-6} and a HI above 1.0 as the point of departure for evaluating carcinogenic risk.

U.S. EPA Specific Comment #23

Section 10.1.3, Page 249, Paragraph 1. The text states that Site-specific background soil samples could be collected to enable evaluation of statistically based background concentrations. Section 10.2.1 (data limitations and recommendations for future work) should be revised to include a discussion of all data gaps and of needed additional investigation activities to complete the RI and move into the FS phase of work (for example, collecting background samples, further evaluating groundwater downgradient of the coal tunnel area, and further evaluating and refining contaminants of potential ecological concern (COPEC) in ecological risk assessment Step 3).

Response

Please refer to the response to U.S. EPA General Comment #2 regarding the need for determining Site-specific background concentrations. The revised RI Report has been modified to include identification of data gaps and recommendations relative to proposed further investigation activities required to complete the RI, which are included in the Work Plan for Additional RI Activities submitted with the revised RI Report. As noted in the Work Plan, Weyerhaeuser proposes to prepare an addendum to the RI Report to document the additional activities completed at the Site.

U.S. EPA Specific Comment #24

Section 10.1.3, Page 251, "Area 3." The text summarizes the human health risk assessment for Area 3. Because the text previously discussed Area 3 by various subareas, the text should be



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revised to state whether this summary applies to all of Area 3 or whether human health risks differ within various sub areas (Areas 3A, 3B, 3C, 3D, and 3E). This comment also applies to the ecological risk assessment summary presented in Section 10.1.4, Page 253, Paragraph 5.

Response

Evaluation of 11 development areas rather than the 3 areas in the June 20, 2011 RI Report submittal has resulted in this comment no longer being applicable.

U.S. EPA Specific Comment #25

Section 10.1.4, Page 253, Paragraph 4. The last sentence in this paragraph refers to Figure 9.2. According to the figures included in the RI and the report table of contents, Figure 9.2 does not exist-apparently, the correct citation should be to Figure 8.1. If the text is referring to a figure in the ecological risk assessment presented in Appendix J, the text should be revised to clarify this. This comment also applies to the text in Paragraph 0 on Page 254.

Response

The revised RI Report has been modified to reflect the 11 current anticipated Site redevelopment areas.

U.S. EPA Specific Comment #26

Section 10.1.4, Page 254, Paragraph 2. The text discusses Step 3 (problem formulation) of the screening-level ecological risk assessment (SLERA). The text implies that based on the results of the SLERA, the baseline ecological risk assessment will move forward to include (1) refining COPECs, (2) considering Site-specific background concentrations, and (3) using food chain models to evaluate risks to upper trophic level receptors. The text should be revised to discuss when and how these steps will occur (also see specific comment 16).

Response

Representatives from the U.S. EPA, MDEQ, SulTRAC, CDM, Weyerhaeuser, and CRA participated in conference calls on September 28, 2011 and October 28, 2011 related to draft RAOs and the HHRA and SLERA portions of the RI Report. Subsequently on behalf of Weyerhaeuser, CRA prepared a memorandum, entitled *Proposed Modifications to Human Health*



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and Ecological Risk Assessments, Remedial Investigation Report, Former Plainwell, Inc. Mill Property, Plainwell, Michigan, which was submitted to U.S. EPA on November 9, 2011.

The November 9, 2011 memorandum presented a modified approach to the SLERA performed as part of the June 20, 2011 RI Report submitted to the U.S. EPA, including the refinement of the Constituent of Potential Ecological Concern (COPECs) as Step 3a of the U.S. EPA 8-Step Process. This refinement in Step 3a considered frequency of detection (FOD), exposure concentrations other than the maxima, specific receptor groups (terrestrial plants, soil invertebrates, avian receptors, and mammalian receptors), alternative ecological benchmarks, and background concentrations of metals. The objective of the refinement process was to focus the potential future baseline ERA and data collection on those constituents, exposure pathways, and receptors that pose the greatest potential for risk.

U.S. EPA provided comments on the HHRA and SLERA portions of the RI Report and the November 9, 2011 memorandum on November 23, 2011, which are addressed under separate cover, and request the development of a Technical Memorandum identifying the Toxicity Reference Values (TRVs) proposed for use in the refinement COPECs identified in the SLERA completed for the Site. U.S. EPA requested that the memorandum be prepared and submitted to the Agency for review and comment prior to initiating the refinement process, which is Step 3a of the U.S. EPA 8-step process for conducting ERAs. The Technical Memorandum identifies the TRVs proposed for use to evaluate risk to avian and mammalian receptors, along with the rationale for selection of the TRVs, and will be submitted under separate cover concurrently with the revised RI Report.

U.S. EPA Specific Comment #27

***Section 10.2.1.1, Page 254.** The text states that "PCBs...were detected in soil samples in exceedance of the Part 201 criteria...in Area 1." This section of the report contradicts the information presented in earlier portions of the report. The nature of PCB impact at the site needs to be described in the report.*

Response

The identification of PCBs above the Part 201 Generic Residential and/or Non-Residential Cleanup Criteria in this section was a typographical error. PCBs were not detected in the soil samples collected in the portion of the Site identified as "Area 1" during the characterization of the Site at concentrations above the Part 201 Generic Residential and/or Non-Residential Cleanup Criteria.



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There have been significant changes made to the revised RI Report in response to U.S. EPA comments, in particular, the way that the data has been summarized and evaluated relative to separation of the Site into three areas (Area 1, Area 2, and Area 3), consistent with the approach applied in the Site characterization, to separation of the Site into 11 areas (Residential Areas 1 through 4, Waterfront Plaza, Mixed Residential/Commercial Areas 1 and 2, and Commercial Areas 1 through 4). As a result, the above comment is no longer applicable.

U.S. EPA Specific Comment #28

Appendices A, G, and H. The reviewers found it very difficult to correlate the following: (1) overall data summary in Appendix A, which follows sample identification order; (2) the analytical reports in Appendix G, which follow the sample collection date (except for Synthetic Precipitation Leaching Procedure [SPLP] reports, which follow no apparent order); and (3) the data validation memoranda in Appendix H, which are separate documents for each area studied. Some sort of cross-index, perhaps in the form of a spreadsheet, would be very useful and could be placed, with an explanatory note, at the start of Appendix G.

Response

A cross-matrix reference table, based on the sample identification number and sample location, has been developed and is included at the beginning of Appendix G. The cross-reference table provides a quick-reference summary of where the reader can find information in the tables, analytical reports, and data validation memoranda for each of the individual samples collected as part of the RI.

U.S. EPA Specific Comment #29

Appendix G, Laboratory Report "056394 CRA SDG 05-07C K1000570 Exp." The file for this report has been damaged and could not be opened. A usable version should be located and placed in the appendix.

Response

A usable version of the file 056394 CRA SDG 05-07C K1000570 Exp has been obtained and is included on compact disk in Appendix G.



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U.S. EPA Specific Comment #30

Appendix H, General. It would be very useful to begin this appendix with a general summary, emphasizing the problems with the data. A fuller version of the "Data Quality Summary Reports" and the "Usability Assessment" from Worksheet Nos. 33 and 37, respectively, of the QAPP may be appropriate for that purpose.

Response

A memorandum summarizing the results of the data validation has been developed and is presented at the beginning of Appendix H.

U.S. EPA Specific Comment #31

Appendix H. Many VOC results were rejected because initial and/or continuing calibrations had a relative response factor (RRF) less than 0.05. This accords with the 1999 edition of the National Functional Guidelines (NFG), cited in Worksheet No. 36 of the QAPP. However, more recent editions of the NFG (dating from 2005 and 2007, as well as the current edition of 2008), include "Table 15. Volatile Compounds Exhibiting Poor Response" and specify that those compounds will not be qualified unless their RRFs are less than 0.01. All of the frequently rejected compounds-acetone, 2-butanone, 4-methyl-2-pentanone, 2-hexanone, and 1,2-dibromo-3-chloropropane-are listed in that Table 15, and have RRFs equal to or exceeding 0.01 in all cases discussed in the data validation memoranda within this appendix. Consideration should be given to modifying the data validation memoranda and data tables to reflect the current guidance from EPA.

Response

The 2005, 2007, and 2008 U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Superfund Organic Methods Data Review contains numerous and significant differences from the 1999 edition of the organic NFG cited in the approved QAPP. The current version (and versions from 2005) are based on the CLP SOW for Multi-Media, Multi-Concentration Organics Analysis (SOM01.X) and represent significant changes from prior CLP methods resulting in unresolvable differences between new validation guidance associated with these CLP methods and the SW-846 methods cited and used for this project. Application of these NFGs for data validation, if possible, would require a complete revision of the data quality assessment and validation (DQA) resulting in numerous changes to the qualification of data.



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An alternate option would be to incorporate the current NFG initial and continuing calibration evaluation criteria into a revised DQA of the volatile data for this event, but the parameters impacted are not anticipated COCs at the Site and this arbitrary revision of accepted relative response factors (RRF) would not provide any additional usable data. It also should be noted that since these are not anticipated COCs, as confirmed by the lack of significant detections, the rejection of this data has limited to no impact on this investigation.

U.S. EPA Specific Comment #32

Appendix H. Many of the acidic semivolatile organic compound (SVOC) results were rejected due to very low recoveries (less than 10 percent) of one or more of the four acidic surrogates used by the laboratory in the analysis. The narratives in the laboratory reports note that many samples subjected to SPLP extraction increased the pH of the extraction fluid from 4.2 to about 10 during the extraction. The alkalinity of the soil would cause severe matrix interference with extraction of the acidic SVOC, as reflected in the surrogate recoveries. This matrix interference should be discussed, along with its implications for data completeness and usability.

Response

Based on the surrogate recoveries, there appeared to be some form of matrix impact on the acidic semi-volatile compounds (SVOC) or phenolic compounds, and although a significant amount of soil data was rejected, over 80 percent of the Phase II RI data was not. It should also be noted that of the 49 Matrix Spike/Matrix Spike Duplicates analyzed as part of the Phase II RI, only 8 had recovery violations that impacted data quality. Of the roughly 600 SVOC analyses completed as part of the Phase II RI, there were only 37 hits of these phenolic compounds, which indicate that these phenolic compounds may not be COCs for the overall Site and; therefore, this matrix effect has limited impact on this investigation.

U.S. EPA Specific Comment #33

Appendix H. Many PCB analytical results were analyzed at a dilution, had irregular surrogate recoveries, or both. The laboratory reports noted that these phenomena were apparently due to matrix interference, especially in some samples with an "oily" appearance or a third phase in the extraction process. This interference should be discussed, along with its implications for data completeness and usability.



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Response

There were 545 soil samples analyzed for PCBs during the Phase II RI, and of these, only 64 samples were analyzed at dilution. Of the 64 samples analyzed at dilution, 32 of these samples resulted in no detection of PCBs. These 32 samples were all analyzed at a 1:10 dilution, which resulted in reported detection limits 40 times less than the Part 201 Generic Residential Direct Contact Criteria. Other matrix-related data quality assessment indicators (surrogates and matrix spike/matrix spike duplicates [MS/MSDs]) were not significantly impacted by matrix effects with only 20 samples (16 surrogate spiked and 5 matrix spiked) that were analyzed without dilution qualified. This matrix issue does not impact data completeness and has no impact on data usability.

Should you have any questions with regard to this letter, please do not hesitate to contact the undersigned.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Gregory A. Carli, P. E.

JQ/7/Pwl.

Encl.

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